

Abstract

A constant current is formed by supplying voltage differences between bases and emitters of a first transistor which allows a first current to flow in the emitter thereof and a second transistor which allows a second current having a current density larger than a current density of the first transistor to flow in an emitter thereof to a first resistance. A second resistance is provided on a ground potential side of a circuit in series with the first resistance. A third and a fourth resistances are provided between collectors and the power supply voltages of the first transistor and the second transistor. Both collector voltages of the first and second transistors are supplied to a differential amplifier circuit having the CMOS constitution thus forming an output voltage and, at the same time, the output voltage is supplied to bases of the first transistor and the second transistor in common.